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Keynote Speakers

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Martin Loosemore | Roger Flanagan | Tristram Carfrae | Narayan Swamy | V. Ramakrishnan | Ian R Thomas

Martin Loosemore

Martin is Professor of Construction Management and Associate Dean at the University of New South Wales, Sydney, Australia. He is a Fellow of the Royal Institution of Chartered Surveyors (FRICS) and Fellow of the Chartered Institute of Building (FCIOB). Martin provides strategic advice about the development and implementation of risk and opportunity management systems to many private and public sector organisations and NGOs in Australia and Asia.

In 2002, Martin was a consultant to the Australian Royal Commission into the Building Industry, advising on international workplace reform and productivity. Recently he has also worked with Tsinghua University in China, the Beijing Olympic Organizing Committee (BOCOG) and the Ministry of Science and Technology in China to develop a risk and opportunity management system for the 2008 Beijing Olympic games facilities. He has published many articles and four international books in risk management, crisis management, facilities management, occupational health and safety and human resource management.

In 2000 he was awarded the American Society of Civil Engineers' Engineering Management - Outstanding Journal Paper Award for peer-reviewed paper entitled "The psychology of accident prevention in the construction industry". In 2002 he was awarded the UK Literati Club Highest Commendation Award for a paper entitled "Customer focussed benchmarking in facilities management". In May 2004, he was winner of Literati award for excellence for an article entitled flexible problem solving in construction projects on the national museum of Australia project, published in the International Journal of Team Performance Management.

In March 2006, he was appointed a visiting Professor at the

Graduate School of Engineering, Chinese Academy of Sciences in Beijing and received an International Innovation Award from the UK's Chartered Institute of Building for his work in developing and implementing an innovative risk and opportunity management system for Multiplex Facilities Management. This unique approach is documented in the recent book: Loosemore, M , Raftery, J, Reilly, C and Higgon, D (2005) Risk Management in Projects, Taylor and Francis, London.

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Roger Flanagan

 Professor of Construction Management, School of Construction Management and Engineering, Engineering, University of Reading

Non-Executive Director of Skanska AB (parent company of the Skanska Group world wide) and the Halcrow Group.

Advisor to the World Economic Forum, Switzerland, for the Engineering and Construction Sector Governor's Meeting, Davos.

Member of the College of Assessors for the Engineering & Physical Sciences Research Council (EPSRC), Built Environment Programme.

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Tristram Carfrae

Profession	Structural Engineer
Current Position	Principal, Arup Fellow
Joined Arup	1981
Qualifications	MA - Mechanical Sciences Tripos, Cambridge University

Tristram is responsible for the design of an impressive array of award winning buildings and is regarded internationally as a leading designer of sporting stadia and light weight long-span structures.

Tristram is behind the design of The Water Cube - Beijing's National Swimming Center for the 2008 Olympics. He also boasts an impressive portfolio of facilities created for the 2000 Sydney Olympics, including the RAS Exhibition Halls, the Dunc Gray Velodrome, and the Olympic Tennis Centre.

He has also helped design six structures that have won Special Awards from the Institute of Structural Engineers (IStructE) - the world's premier structural accolade. No other structural engineer has achieved this.

Tristram believes that good buildings should consume less materials, energy, time and money while at the same time providing greater amenity. He has a reputation for challenging the established way of doing things, to explore better solutions, moulding both materials and people to his vision.

He is one of six Arup Fellows (out of a global staff of 7,000). This accolade honours those who have significantly contributed to the firm's reputation for excellence in innovation and design and designates him as a leader with the role of ensuring this continues.

This year, Tristram was named as one of Australia's Top 100 most influential engineers. He was Australian Professional Engineer of the Year in 2001.

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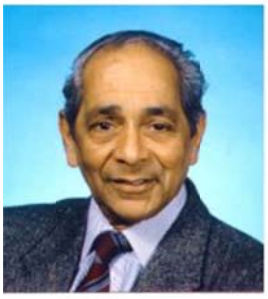
Narayan Swamy



Professor Narayan Swamy is currently Professor Emeritus in the Department of Mechanical Engineering at the University of Sheffield, England. Professor Swamy has been involved in teaching, research, design and consultancy for over forty five years. In all these activities he has adopted a HOLISTIC approach integrating material characteristics and structural performance with DESIGN as a total concept of civil engineering construction. His research activities reflect this approach, and encompass a wide range of inter-related and interdependent topics concerned with concrete materials,

concrete structures, their interactive performance in real environments, design and construction. Professor Swamy has lectured extensively all over the world, especially on topics such as Technology Transfer, Holistic Design and Design for Durability, Environment and Sustainability.

Professor Swamy has had the privilege to guide and train over one hundred Doctorate students leading to the publication of over two hundred refereed papers in Journals and Conferences. He has received many Research Awards, has edited a large number of books, and has been the Founder Editor of the Journal Cement and Concrete Composites for over 27 years. He has extensive international research collaboration, and considers Teaching and Research to be interactive and inter-disciplinary activities.

Professor Swamy is a Fellow of the Institution of Civil Engineers (ICE), the Institution of Structural Engineers (IStructE), the Institution of Mechanical Engineers (IMechE), the American Concrete Institute (ACI) and the American Society of Civil Engineers (ASCE). He is also a post Chairperson of the Yorkshire sections of the Concrete Society, ICE and IStructE.

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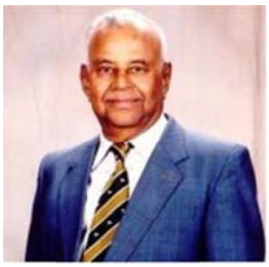
V. Ramakrishnan



Prof. V. Ramakrishnan is the Regents Distinguished Professor at the Technological University of South Dakota. He graduated with two D.I.C degrees and a Ph.D. from the Imperial College of Science and Technology, University of London in 1960.

He has done extensive research and applications using concrete fiber composite for the past 30 years. He has been consultant to all the major fiber producers (both steel and synthetic) in U.S.A. He has authored or co-authored 3 books and more than 250 papers of which more than 10 papers were on non-destructive testing of concrete. He has done a lot of research and has field experience in using non-destructive testing techniques for evaluating concrete.

Dr. Ramakrishnan has received numerous awards including ACI/CANMET Award for his contributions in fiber reinforced Concrete and CRC Robert Phileo Award for excellence in research from the ACI.

Dr. Ramakrishnan an international consultant has been invited thrice by the Chinese government in 1987 and 1989. Third time he visited China in 1997 as consultant for a fiber distribution company. He had presented papers and lectures in Australia, Japan, U.K, Canada, all countries in Europe, India, Thailand, Taiwan, Singapore, Trinidad, Jamaica, Egypt, Mexico, Brazil, Mongolia etc.

To recognize the tremendous impact that he has made in advancing higher education and materials research and for his contributions to the state, the governor of South Dakota State proclaimed September 29, 2002, as "Dr. Venkataswamy Ramakrishnan Day".

For his substantive contributions to South Dakota School of Mines & Technology research activities in concrete technology and other areas, a new materials laboratory at the university was dedicated as Rama Materials Laboratory in April 2002.

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Ian R. Thomas

Professor Thomas is Director of the Centre for Environmental Safety and Risk Engineering (CESARE) at Victoria University, Melbourne, Australia. In this role he is responsible for wide ranging research on fire safety in buildings and on risk management. He graduated in civil engineering at Monash University in 1968 and with a PhD at the same university in 1972 (Thesis title: Reinforced Concrete Hyperbolic Paraboloid Shell Structures). This was followed by seven years of experience of general steelwork design, development of steel building systems and methods of design and analysis. During this period involvements included work with the Australian Institute of Steel Construction on standardized connections and membership of several Standards Australia committees including the Crane Code sub-committee ME5/1 Structures and the Steel Structures Code Committee BD1. From 1979 to the 1999 he was with BHP Melbourne Research Laboratories, initially concentrating on steel structures but subsequently was responsibile for projects dealing with the behaviour of structures in fire and mechanical and structural engineering in a wide range of applications.

Professor Thomas is a pioneer of the change in fire safety practice from the prescriptive approach to the

performance-based fire Safety Engineering approach. In 2002 Professor Thomas and two colleagues won the Chapman Medal given by the Institution of Engineers, Australia, for the best paper published in 2001 in the Australian Journal of Structural Engineering and in 2004 with Dr Ian Bennetts was awarded the Jack Bono Engineering Communications Award by the Society of Fire Protection Engineers (USA) for the paper published in Volumes 12 and 13 of the Journal of Fire Protection Engineering that most contributed to the advancement and application of fire protection engineering.

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ISEC – 4

4th International Structural Engineering and Construction Conference

"Innovations in Structural Engineering and Construction"

26 – 28 September 2007
Park Hyatt Melbourne, Australia
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The Institution of Engineers
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fbe Faculty of the Built Environment
UNSW The University of New South Wales

RMIT UNIVERSITY

Friday, 28 September 2007

13:40 - 14:40	Ninth Parallel Sessions				
	Chair: Dr. Tom Molyneaux **Innovative Structural Design -(III)** **Ballroom**	Chair : Dr. Takashi Tsutsumi **Geotechnical Engineering, Foundation and Tunnelling – (II)** **The Library**	Chair : Dr. Swapan Saha **Construction Planning and Project Management – (IV)** **Trilogy**	Chair :Prof. Roger Flanagon **Concrete Masonry and Structures – (VI)** **Fairmont One**	Chair : Dr. Richard Ekhaus **Bridges and Special Structures – (II)** **Fairmont Two**
13:40 – 13:55	**M^2S^2 modular deployable shelter system – concept and analysis technique** T. Omar, G. Van Erp & T. Aravinthan *Centre of Excellence in Engineered Fibre Composites; University of Southern Queensland, Toowoomba, QLD, Australia* P. Key *Kencana Strarch Asia Pacific, Kuala Lumpur, Malaysia*	**Effect of lateral cyclic load on axial capacity of pile group in soft clay** S. Basack *Department of Applied Mechanics, Bengal Engineering & Science University, Shibpur, Howrah, India*	**NPV – Decision making model for street maintenance and rehabilitation** A. Fastrich & G. Girmscheid *Swiss Federal Institute of Technology, Institute for Construction Engineering and Management, Zurich, Switzerland*	**Destructive factors causing deterioration of paints on buildings walls** R. Miniotaite *Kaunas Technical College, Kaunas, Lithuania*	**The art of retrofitting historic arch bridges** S. Morcos *HDR Engineering, Inc., Los Angeles, United States*
13:55 – 14:10	**Curragh train load-out: innovative design for short construction periods** D.T. Turner *Parsons Brinckerhoff, Brisbane, Queensland, Australia*	**Elasticity module of Karkheh earth dam, study and behavior through inclinometers and SSM** A. Turk *KWPA, Ahwaz, Khuzestan, Iran* A. Kolahchi & F. Salehi *Stability Division, Karkheh Reservoir Earth Dam, Khuzestan, Iran* S. Ghanavatizadeh *Biology Department, Jondi Shahpour University, Ahwaz, Khuzestan, Iran*	**Front-end decision analysis in development and delivery of complex projects** H. Doloi The University of Melbourne, Parkville, Melbourne, Victoria, Australia	**Nonlinear behavior of ultra-high strength concrete flexural elements** A. Elmenshawi & T. Brown *Department of Civil Engineering, University of Calgary, Calgary, Canada*	**Jointless bridges: current practice and research in China** Z.P. Lin & W. Lin *Fuzhou University, Fuzhou, China* D.W. Peng *Shanghai Institute of Technology, Shanghai, China*

Wednesday, 26 September 2007

9:00-11:00	Registration and Welcome Morning Tea				
11:00-11:30	Opening Ceremony				
11:30-12:05	First Keynote **The drivers and issues shaping the construction sector** R. Flanagan *Reading University, UK*				
12:05-12:40	Second Keynote **Development of new construction materials for structural use** V. Ramakrishnan *South Dakota School of Mines and Technology, USA*				
12:40-14:00	Lunch				
14:00-15:30	First Parallel Sessions				
	Chair: Prof. James Sullivan **Concrete and Masonry Structures – (I)** **Ballroom**	Chair: Prof. Nader Ghafoori **Construction Materials – (I)** **Trilogy**	Chair: Prof. Frank Yazdani **Dynamic Impact and Earthquake Engineering – (I)** **Library**	Chair: Mr. Greg Schofield **Steel Structures – (I)** **Fairmont One**	Chair: Prof. Amarjit Singh **Construction Planning & Project Management – (I)** **Fairmont Two**
14:00-14:15	**A review and critical comparison of the provisions for the anchorage of tensile reinforcement in American, European and Australian Standards** R.I. Gilbert *The University of New South Wales, Sydney, Australia*	**Free and restrained shrinkage behaviours of OPC and slag concretes with admixed polypropylene fibres** T.K. Aly, J.G. Sanjayan & F.G. Collins *Monash University, Clayton, VIC, Australia*	**Dynamic and static compressive behaviour of aluminum foam** G. Costanza & M.E. Tata *Mechanical Engineering Department, "Tor Vergata" University, Rome, Italy*	**S-N curves for thin CHS-CHS T-joints under in-plane bending using the hot spot stress method** F.R. Mashiri *University of Tasmania, School of Engineering, Hobart, Tasmania, Australia* X.L. Zhao *Department of Civil Engineering, Monash University, Melbourne, Victoria, Australia*	**Comparison of various delay analysis methodologies for construction projects** J.B. Yang *Institute of Construction Management, Chung Hua University, Hsinchu, Taiwan* P.C. Yin *T.Y.Lin Taiwan Consulting Engineers, Taipei, Taiwan* C.K. Kao *Institute of Construction Management, Chunghua University, Hsinchu, Taiwan*
14:15-14:30	**A rammed earth and concrete wall system for sustainable housing** I. Patnaikuni & T. Molyneaux *School of Civil, Environmental and Chemical Engineering, RMIT University Melbourne, Australia* J. Novotny *Therma-wall Industries, Melbourne, Australia*	**Self-compacting concrete for direct finish structures** R. Hela & L. Bodnarova *Brno University of Technology, Faculty of Civil Engineering, Brno, Czech Republic* D. Henkl *The University of Economics, Prague, Czech Republic* O. Fiala *Morfico s.r.o., Tišnov, Brno*	**Plastic deformation of a ring system during intensive collision** J. Shen & G. Lu *Swinburne University of Technology, Hawthorn, Victoria, Australia*	**Study on blind-bolted split tee connections to concrete-filled steel tubes for steel moment-frame buildings** H. Yao & H.M. Goldsworthy *The University of Melbourne, Melbourne, Australia* E.F. Gad *Swinburne University of Technology and The University of Melbourne, Melbourne, Australia*	**New solution of S curve analysis and SYSCAB-POERP system** F.L.S. Yi *City Great Information Technology Co., Ltd., Taipei, Taiwan*

Wednesday, 26 September 2007

14:30 – 14:45	**Flexural fatigue response of latex modified reinforced concrete beams** B.K. Prasad *Department of Civil Engineering, NIT Jamshedpur, India* U. Gupta & U.B. Choubey *Shri G. S. Institute of Technology and Science, Indore, India*	**Ready mixed self compacting lightweight concretes** R. Hela & M. Hubertova *Brno University of Technology, Institute of Technology of Building Materials and Components, Brno, Czech Republic*	**Failure modes of clamped square steel beams subjected to blast loads** H. H. Jama, M. R. Bambach, R.H. Grzebieta & X-L. Zhao *Department of Civil Engineering, Monash University, Clayton, Australia* G. N. Nurick *Blast Impact and Survivability Research Unit (BISRU), Department of Mechanical Engineering, University of Cape Town, South Africa*	**Investigation on basic and optimum COF of frame structures using fishbone-shaped model** Y.G. Zhao & W.C. Pu *Nagoya Institute of Technology, Nagoya, Japan*	**Analysis of construction accidents using data from OSHA citations for safety violations** H. Al-Qalyuby & M.A. Usmen *Department of Civil and Environmental Engineering, Wayne State University, Detroit, Michigan, USA*
14:45 – 15:00	**Structural precast concrete in Melbourne, Australia** S. R. Hughes *Hollow Core Concrete Pty Ltd, 12-14 Maria Street Laverton North Australia*	**A study on the durability of porous concrete using slag-gypsum cement** Y. Mitsuiwa & J. Nakamoto *Wakayama National College of Technology, Gobo, Wakayama, Japan* K. Amo *Anan National College of Technology, Anan, Tokushima, Japan* K. Yokoi *Kochi National College of Technology, Nangoku, Kochi, Japan*	**Seismic retrofit of reinforced concrete structures without adhesive anchors** T. Ohmura *Musashi Institute of Technology, Tokyo, Japan* S. Hayashi *Tokyo Institute of Technology, Kanagawa, Japan* K. Kanata *Taisei, Kanagawa, Japan* T. Fujimura *Taisei, Tokyo, Japan*	**Corrosion and fatigue behaviors of steel plates at the boundary with concrete** I.T. Kim *Pusan National University, Busan, Korea* S. Kainuma *Kyushu University, Fukuoka, Japan* N. Hosomi *TTK Corporation, Ibaraki, Japan*	**The impact of value improving practices on project performance** J.P. Lozon & G.F. Jergeas *University of Calgary, Calgary, Alberta, Canada*
15:00 – 15:15	**Structural behaviour of R/C cylindrical panel with gable wall** T. Hara & N. Hashimoto *Tokuyama College of Technology, Shunan, Japan*	**Stochastic variability of input parameters for calculation of autogenous shrinkage of hardening concrete** H.W.M. van der Ham, E.A.B. Koenders & K. van Breugel *Delft University of Technology, Delft, Zuid Holland, The Netherlands*	**Numerical and experimental studies on active control of structures using hyper vision technology** J. Motoyama & T. Nakayama *Graduate Student, Graduate School of Engineering, Hiroshima University, Higashi-Hiroshima, Japan* H. Nakamura, T. Tsuji & I. Ishii *Graduate School of Engineering, Hiroshima University, Higashi-Hiroshima, Japan*	**Damage assessment of MR steel frames with a simple criterion based on stiffness deterioration** H. Moharrami & H. Madani *Tarbiat Modares University, Tehran, Iran*	**The prototype of materials requirement system in the construction project** N.-H. Pan & K.-Y. Chen *Department of Construction Engineering, National Yunlin University of Science and Technology, Taiwan*

Friday, 28 September 2007

12:10 – 12:25	**Predicting strength of concrete using Sclerometer – reliability of the regression model** S.R.M Khan, J. Noorzaei, M.R.A. Kadir & M.S Jaafar *Universiti Putra Malaysia, Serdang, Selangor, Malaysia* W.A.M Thanoon *Universiti Teknologi Petronas, Bandar Seri Iskandar, Tronoh, Malaysia*	**Spatial tracking challenge for Augmented Reality on building construction sites** P.S. Dunston, J.V. Sinfield & D. Shin *Purdue University, School of Civil Engineering, West Lafayette, Indiana, USA*	**Shop drawing automation and material waste minimization in the construction of wood houses utilizing 3D-CAD and optimization techniques** J. D. Manrique & M. Al-Hussein *University of Alberta, Department of Civil & Environmental Engineering, Edmonton, Alberta, Canada* A. Bouferguene *Campus Saint-Jean/ University of Alberta Edmonton, Alberta, Canada* R. Nasseri *Landmark Group of Builders, Edmonton, Alberta, Canada*	**Space optimization for panelized prefabricated wood structure for residential construction** A. ElGanainy, J. Olearczyk & M. Al-Hussein *University of Alberta, Edmonton, Alberta, Canada*	**Recycling concrete rubbles with reactive aggregates from ASR-affected bridge pier** A. Sugiyama, K. Torii, K. Sakai, K. Shimizu & Y. Sato *Department of Civil and Environmental Engineering, Div. of Natural Science & Technology, Kanazawa University, Kanazawa, Ishikawa, Japan*
12:25 – 12:40					**Virtual testing of compressive strength of concrete** E.A.B. Koenders & E. Schlangen *Microlab, Delft University of Technology, Delft, The Netherlands* E. Dado *Processes in Building, Delft University of Technology, Delft, The Netherlands*
12:40 - 13:40	Lunch				

Friday, 28 September 2007

11:40 – 11:55	**An innovative Design/ Build Frame (DBF) concept study - seismic design of mid-rise residential/office building with reinforced concrete ductile moment frames integrated with prefab modules** A. I.-K. Chang & B. N. Liu *College of Architecture, University of Oklahoma, Norman, Oklahoma, USA*	**Design of the bored tunnel lining segments with close proximity effect for Songshan line of Taipei MRT system** S.-M. Kang, J.-H. Guo & Y.-H. Whang *Moh and Associates, Inc. Taiwan, R.O.C.* C.-C. Kao *Department of Rapid Transit Systems, Taipei City Government, Taiwan, R.O.C.*	**Behaviour of thin-walled CHS beams reinforced by CFRP sheets** J. Haedir, M.R. Bambach, X.-L. Zhao & R.H. Grzebieta *Monash University, Melbourne, Victoria, Australia*	**The development of an expert system for the selection of sanitary sewer construction method** Y.-C. Shiau, J-W. Liu, T-P. Wang & D-H. Chu *Institute of Construction Management, Chung-Hua University, Hsin-Chu, Taiwan*	**Pozzolanic-Stabilised Mixture (PSM) for red sand as road base materials** P. Jitsangiam & H. Nikraz *Curtin University of Technology, Perth, Western Australia, Australia* E. Jamieson *Alcoa World Alumina (Alcoa), Kwinana, Western Australia, Australia*
	Non Destructive Testing and Evaluation – (I) **Ballroom**	**Simulation and Visualization** **Trilogy**	**Construction Planning and Project Management – (III)** **Fairmont One**	**Structural Optimization and Evolutionary Procedures – (II)** **The Library**	**Construction Materials – (VI)** **Fairmont Two**
11:55 – 12:10	**Micro electro mechanical systems based sensors for non destructive evaluation** T. Karthik *Department of Electrical and Computer Engineering, University of Missouri Columbia, Columbia, USA* R. Singh *Department of Microelectronics and Photonics, University of Arkansas, Fayetteville, USA*	**A survey of Augmented Reality in architecture, design and construction** X. Wang *Key Centre of Design Computing and Cognition, University of Sydney, Australia*	**Construction error and optimal inspection rate** S.K. Saha & M.P. Hardie *University of Western Sydney, Sydney, New South Wales, Australia*	**A level set method with maximum design domain limits** J. Rong & J. Yi *School of Automotive and Mechanical Engineering, Changsha University of Science and Technology, Changsha, Hunan Province, P. R. China* Q.Q. Liang *Faculty of Engineering and Surveying, the University of Southern Queensland, Toowoomba, QLD, Australia*	**Flexural behavior of manufactured sand as fine aggregate for future construction** V. Bhikshma & M.D. Bhavani *Department of Civil Engineering, University College of Engineering, Osmania University Hyderabad, India*

Wednesday, 26 September 2007

15:15 – 15:30	**Behavior of concrete prism after high temperature under cyclic reversed loading** G.L. Yuan & Q.T. Li *China University of Mining & Technology, Xuzhou, Jiangsu, China*	**Study on the development of medium strength self-compacting concrete using fly ash** A.K.Bose *ITD Cementation India Limited , Kolkata, India* S.Mandal *Civil Engineering Department, Jadavpur University , Kolkata, India*	**Seismic design vs. progressive collapse: a reinforced concrete framed structure case study** A.M. Ioani, H.L. Cucu & C. Mircea *Technical University, Cluj-Napoca, Romania*	**Steel plate pre-stressing reinforcement for notched steel girder ends** M. Sakano *Kansai University, Osaka, Japan* K. Matsumoto *Railtec Co., Osaka, Japan* H. Namiki *Kyobashi Mentec Co.Ltd., Osaka, Japan*	**Management information system for home building enterprises** H. Yu, & M. Al-Hussein *University of Alberta, Edmonton, Canada* R. Nasseri Landmark Master Builder Inc., Edmonton, Canada
15:30—16:15	Afternoon Tea Break				
16:15—17:45	Second Parallel Sessions				
	Chair: Prof. Takashi Hara **Concrete and Masonry Structures – (II)** **Ballroom**	Chair: Prof. Rudolf Hela **Construction Materials – (II)** **Trilogy**	Chair: Prof. V. Bhishma **Dynamic Impact and Earthquake Engineering – (II)** **The Library**	Chair: Prof. P.K. Singh **Steel Structures – (II)** **Fairmont One**	Chair: Prof. Sujeeva Setunge **Construction Planning and Project Management – (II)** **Fairmont Two**
16:15 – 16:30	**Performance-based optimization of strut-and-tie models in reinforced concrete deep beams** Q.Q. Liang, *Faculty of Engineering and Surveying, University of Southern Queensland, Toowoomba, Australia* A.W.M. Ng *School of Architectural, Civil and Mechanical Engineering, Victoria University, Melbourne, Australia*	**Use of low frequency dielectric spectroscopy for monitoring cement hydration kinetics** L. Hanžič, G. Mandžuka & D. Korošak *University of Maribor, Faculty of Civil Engineering, Maribor, Slovenia*	**Characteristics of quality factor of ground identified using vertical array records of earthquake motions** O. Tsujihara *Department of Civil Engineering, Wakayama National College of Technology, Gobo City, Japan* T. Sawada *Department of Civil Engineering, University of Tokushima, Tokushima City, Japan*	**Ultimate slip behavior of double-lined perfobond rib connector** M. Himukai & K. Fujii *Graduate School of Engineering, Hiroshima University, Higashi-Hiroshima, Japan* K. Fukada *West Japan Railway Co., Ltd., Osaka, Japan* Y. Doukan *Ishikawajima-Harima Heavy Industries Co., Ltd., Tokyo, Japan*	**Fuzzy Optimization of construction project network with multiple objectives** A.V.S.S. Kumar *Department of Civil Engineering, and Artificial Intelligence Centre, Osmania University, Hyderabad, India* B. Mir Iqbal Faheem *Department of Civil Engineering, Deccan College of Engineering and Technology, Darussalam, Hyderabad, India*
16:30 – 16:45	**Study on R/C member subjected to torsion, and axial force** H. Tsukuda, T. Shigematu & T. Tamura *Tokuyama College of Technology, Tokuyama, Japan*	**Strength of mortar containing activated slag** A.A. Adam, T.C.K. Molyneaux, I. Patnaikuni & D. Law *RMIT University, Melbourne, Victoria, Australia*	**Effectiveness of base isolation system for simple RC frame buildings** V. Kilar & D. Koren *University of Ljubljana, Faculty of Architecture, Ljubljana, Slovenia*	**Effect of semicircle notching on fatigue life of welded joints between steel deck and vertical stiffeners** Y. Kawakami *Hanshin Expressway Management Technology Center, Osaka, Japan* M. Sakano & Y.Sakai *Kansai University, Osaka, Japan*	**Identification of corrective action recommendation for Labor Management in project cost control** L.S. Riantini, A. Veronika & B.A. Firmansyah *Construction Management, University of Indonesia, Depok, Indonesia*

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16:45 – 17:00	**Reliability of bond measuring devices in pretensioned prestressed concrete** I.R.A. Weerasekera & A. Sabesh *Department of Civil Engineering, University of Moratuwa, Sri Lanka* R.E. Loov *Department of Civil Engineering, The University of Calgary, Alberta, Canada*	**Searching for an optimal technical solution and concrete mixture for erosion prevention in dam slides** A. Kryžanowski, M. Mikoš & I. Planinc *University of Ljubljana, Faculty of Civil and Geodetic Engineering, Ljubljana, Slovenia* J. Šušteršič *IRMA Institute, Ljubljana, Slovenia*	**Identification of representative and efficient groups of design earthquake inputs** T. Trombetti, S. Silvestri, D. Malavolta & G. Gasparini *DISTART Department of Construction, University of Bologna, Italy*	**Understanding service stresses in dragline tubular structures** F.R. Mashiri *University of Tasmania, School of Engineering, Hobart, TAS, Australia* X.L. Zhao & D. Pang *Department of Civil Engineering, Monash University, Clayton, VIC, Australia* P. Dayawansa, H. Jiao & G. Chitty *Maintenance Technology Institute, Monash University, Caulfield East, VIC, Australia* J. Price *Department of Mechanical Engineering, Monash University, Clayton, VIC, Australia*	**A major change order in a naval jetty construction project: a case study** M.T. Gargari *College of Applied Science, University of Cincinnati, Cincinnati, Ohio, USA*
17:00 – 17:15	**Corewall and outriggers as lateral system for the Peak at Sudirman Jakarta** D. Sukamta *Indonesian Society of Civil and Structural Engineers* *Davy Sukamta & Partners, Structural Engineers, Indonesia*	**The effect of reinforcement type on the ductility and robustness of one-way reinforced concrete slabs** R.I. Gilbert & Z.I. Sakka *The University of New South Wales, Sydney, Australia*	**Maximum rotational response of asymmetric structures: estimation through a simple (code-like) but effective formula** G. Gasparini, T. Trombetti & S. Silvestri *DISTART Department of Construction, University of Bologna, Italy*	**Collapse mode of plate girder with thick flange under bending** M. Irikawa, K. Fujii & H. Nakamura *Graduate School of Engineering, Hiroshima University, Higashi-Hiroshima, Japan* Y. Ogawa *Mes Technoservice Co., Ltd, Okayama, Japan*	**The engineer at a construction site is more a professional manager than an engineer** S.K. Das *Salt Lake City, Kolkata, India*
17:15 – 17:30	**Experimental investigation on the behavior of RC flat plat structure with nonrectangular columns** W. Liu *School of Civil Engineering & Architecture, Beijing Jiaotong University, Beijing, China* C. Huang *School of Civil & Hydraulic Engineering, Dalian University of Technology, Dalian, China*	**Alkali silica reactivity of various andesites in saturated NaCl solution** K. Yamada *R&D Center Taiheiyo Cement Corp., Chiba, Japan* T. Fujii & A. Imai *Earth Resource Engineering., Kyushu University, Fukuoka, Japan* Y. Kawabata & H. Matsushita *Civil Engineering, Kyushu University, Fukuoka, Japan*	**Use of toggle brace system for the amplification of seismic damper motion in building structures** G. Gasparini, T. Trombetti, S. Silvestri & M. Bottazzi *DISTART Department of Construction, University of Bologna, Italy*	**Application of hybrid laser beam +electric arc processes to steel welding** S. Missori & E. Tata *Department of Mechanical Engineering, II University of Rome, Italy* A. Sili *Department of Chemistry and Materials Engineering, University of Messina, Italy*	**Integrating theory of inventive problem solving into the Value Engineering process** X.M. Mao *University of Alberta, Edmonton, Canada* X.Q. Zhang *The Hong Kong University of Science and Technology, Kowloon, Hong Kong.* S. AbouRizk University of Alberta, Edmonton, Canada

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11:10—12:40	Eighth Parallel Sessions				
	Chair: Mr. Lev Razdolsky **Innovative Structural Designed -(II)** **Ballroom**	Chair: Prof. John Buckeridge **Geotechnical Engineering, Foundation and Tunnelling – (I)** **Trilogy**	Chair : Prof. Vojko Kilar **Composite Materials – (II)** **Fairmont One**	Chair :Dr. Phillip Dunstan **Construction Practices in Different Countries – (III)** **The Library**	Chair : Dr. Sai On Cheung **Construction Materials – (V)** **Fairmont Two**
11:10 – 11:25	**Design and construction of a retaining wall constructed from soil-bags** H. Yamamoto & S. Jin *Graduate School for International Development and Cooperation, Hiroshima University, Hiroshima, Japan*	**Analytical study on nonlinear behavior of a new raft foundation system** W. Li *School of Civil Engineering, Shenyang Janzhu University, Shenyang, Liaoning, China* K. Takeuchi *Takeuchi & Partners Architect Engineers' Office LTD., Mihara, Hiroshima, Japan* H. Yamamoto *Graduate School for International Development and Cooperation, Hiroshima University, Higashihiroshima, Hiroshima, Japan*	**Retrofitting reinforced concrete bridge frames using externally bonded FRP sheets** G.R. Pandey *James Cook University, Townsville, Queensland, Australia* H. Mutsuyoshi *Saitama University, Saitama city, Saitama prefecture, Japan*	**Identification of the factors in corporate management that influence construction company's performance in Indonesia** A. Veronika, L.S. Riantini & B.A. Firmansyah *Construction Management, University of Indonesia, Depok, Indonesia*	**Hardened properties of Polyvinylalcohol fibres in fibre reinforced concrete** K. Holschemacher & S. Höer *Leipzig University of Applied Science, Department of Civil Engineering, Leipzig, Germany* U. Pachow *DuraPact GmbH, Haan, Germany*
1:25 – 11:40	**Two general methods for creating tensegrity structures of towers, arches, bridges and stadium roofs** Y. Zhou, Y.M. Xie & X. Huang *School of Civil, Environmental and Chemical Engineering, RMIT University, Melbourne, Australia*	**Dynamic analysis of pile foundations with the deepened pile-cap** A.O. Kolesnikov & V.N. Popov *Institute of Theoretical and Applied Mechanics (SB RAS), Novosibirsk, Russia*	**Flexural behaviour of GFRP reinforced beams in local environment: an experimental study** P.J. Rao, K.J. Rao & N.V.R.C. B. Bhaskar *Faculty of Civil Engineering, Vasavi College of Engineering, Hyderabad, A.P, India.* M.V.S. Rao *Director, Consultancy Services, JNT University, Hyderabad, A.P, India*	**Establishing measures to improve design quality in the Portuguese construction industry** J. P. Couto *University of Minho, Guimarães, Portugal*	**Study on the expansion behavior and microstructure of self-stressing concrete filled steel tube** C. Huang, Z. Shang & F. Jang *Dalian University of Technology, Dalian, China*

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10:10 – 10:25	**Structure generation using evolutionary algorithms** A. Hofmann *Bollinger und Grohmann GmbH, Vienna, Austria* F. Scheurer *ETH Zurich / designtoproduction* GmbH, Zurich, Switzerland K. Bollinger & M. Grohmann Bollinger und Grohmann GmbH, Frankfurt, Germany	**Fire load in a steel building design** L. Razdolsky *LR Structural Engineering Inc, Lincolnshire, Illinois, USA* *University of Illinois at Chicago, Chicago, Illinois, USA*	**Finite element analysis of rectangular concrete columns confined by CFRP laminates under axial and lateral loads** H.M. Soghair, M.H. Ahmed, A.M. Abdel-Hafez & A.I.H. Ramadan *Civil Engineering Department, Faculty of Engineering, Assiut University, ferial, Assiut, Egypt*	**Alteration of structures as an uncertainty process** W. Graf, B. Möller & M. Bartzsch *Institute of Statics and Dynamics of Structures, TU Dresden, Germany*	**Application of favorableness – reality index in evaluation of organization performance, case study: implementation plan of quality management system** M. Ahmadinejad, J. Ayoubinejad, M. Maghrebi & G. Ghahremani *Iran University of Science and Technology, Tehran, Iran*
10:25 – 10:40	**Integrated computerized multi-disciplinary design environment for building structures** P. Felicetti *Felicetti Pty Ltd Consulting Engineers, Melbourne, Australia* Y.M. Xie *School of Civil, Environmental and Chemical Engineering, RMIT University, Melbourne, Australia*	**Study on fire behavior in varied high-rise forms: pilot study** A.T. Onyenobi, B.J Hudson & C.M. Ormerod *University of Salford, Greater Manchester, Lancashire, United Kingdom*	**Fatigue durability improvement of RC beams strengthened with carbon fiber sheets by attaching U-shaped end anchoring** H.S. Choi & J.Y. Park *Department of Civil Engineering, Pusan National University, Busan, Korea* S.D. Kim *Department of Civil and Environmental Engineering, Kyungsung University, Busan, Korea* B.S. Cho *Department of Civill Engineering, Inje University, Gimhae, Korea* J.H. Cheung *Department of Civil Engineering, Pusan National University, Busan, Korea*	**Assessment of load bearing structures** L. Ozola *Latvia University of Agriculture, Jelgava, Latvia* J. Miljan & T. Keskküla *Estonia University of Life Sciences, Tartu, Estonia*	**Assessing the readiness of construction quality assessment systems (CONQUAS) deployment within UK construction organisations** N.Chileshe & Y.L. Sim *Sheffield Hallam University, Sheffield, United Kingdom*
10:40 - 11:10	Morning Tea Break				

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17:30 - 17:45	**An investigation of the application of spun-cast prestressed steel fiber reinforced concrete poles** S. Zhao, R. Gao & X. Li *North China University of Water Conservancy and Electric Power, Zhengzhou, Henan, China*	**Study on sulfate corrosion of spun-cast steel fiber reinforced concrete** S. Zhao, X. Li & S. Wen *North China University of Water Conservancy and Electric Power, Zhengzhou, Henan, China*	**Seismic design of flat bottom silos containing grain-like material** T. Trombetti, S. Silvestri & G. Gasparini DISTART Department of Construction, University of Bologna, Italy	**Development and validation of a simple approach to model aerodynamic loads on a military jet intake structure** G. Chen, R. Boykett, & K. Walker *Defense Science and Technology Organization, Melbourne, Victoria, Australia*	**Revisiting terminology in construction project management** M. Kumaraswamy *The University of Hong Kong, Hong Kong SAR, China* V. Abeysekera Auckland University of Technology, Auckland, New Zealand
18:45 - 20:30	Cocktail Reception				

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8:30 - 9:00	Registration				
9:00 – 9:35	Fifth Keynote **Geometry and structure – the benefit of the third dimension** T.G.A Carfrae *Arup, Sydney, Australia*				
9:40 - 10:40	Seventh Parallel Sessions				
	Chair: Dr. Xiangyu Wang **Innovative Structural Design –(I)** **Ballroom**	Chair : Prof. Ian Gilbert **Fire** **Trilogy**	Chair: Prof. LY. Lu **Composite Materials – (I)** **Fairmont One**	Chair: Dr. Y.L. Pi **Structural Analysis – (III)** **The Library**	Chair: Dr. Reginald L. Amory **Knowledge Management and Quality Assessment** **Fairmont Two**
9:40 – 9:55	**Digital architecture and its implications for structural engineering** R. Hough *Arup, Sydney, Australia; and University of New South Wales, Sydney, Australia* S. Downing *Arup, Sydney, Australia; and RMIT University, Melbourne, Australia* J. Plume *Faculty of the Built Environment, University of New South Wales, Sydney, Australia*	**Finite element analysis of temperatures in concrete filled double skin steel tubes exposed to fires** H. Lu & X. L. Zhao *Department of Civil Engineering, Monash University, Melbourne, Australia* L. H. Han *Department of Civil Engineering, Tsinghua University, Beijing, China*	**Constructing bridges with glass-fiber reinforced composite decks** S.W. Lee & K.J. Hong *Kookmin University, Seoul, Korea*	**Nonlinear analysis and behavior of concrete-filled steel tubular beam-columns** Q.Q. Liang *Faculty of Engineering and Surveying, University of Southern Queensland, Toowoomba, Australia* M.N.S. Hadi *School of Civil, Mining and Environmental Engineering, University of Wollongong, Wollongong, Australia*	**Toward building a knowledge management system in K & A** M. Khaled Khatib & Alami Engineering Company, Beirut, Lebanon T. Mezher & M.A. Abdul-Malak *American University of Beirut, Lebanon*
9:55 – 10:10	**Interfacing between parametric associative and structural software** J.L. Coenders *Delft University of Technology, Delft, The Netherlands* *Arup, Amsterdam, The Netherlands*	**Temperature distribution in grouted sleeve connections subjected to fire and outdoor environment** S. Jiang *College of Civil Engineering, Tongji University, Shanghai, PR China* X.-L. Zhao *Department of Civil Engineering, Monash University, Melbourne, Australia*	**Experimental investigation of innovative hybrid composite girders with GFRP and CFRP** S. Asamoto & H. Mutsuyoshi *Saitama University, Saitama, Japan* T. Aravinthan *University of Southern Queensland, Toowoomaba, Queensland, Australia* K. Suzukawa *Toray Industries Inc., Japan*	**The influence of structural and non-structural components on the lateral performance of high-rise buildings** B. Li, C. F. Duffield & G.L. Hutchinson *Department of Civil & Environmental Engineering, The University of Melbourne, Melbourne, VIC, Australia*	**Using semantic blogging to support knowledge management in construction industry** D. Xue & C. Wang *Faculty of Design Architecture & Building, University of Technology, Sydney, Australia* *I.T. Hawryszkiewycz* *Faculty of Information Technology, University of Technology, Sydney, Australia*

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8:30 - 9:00	Registration				
9:00 – 9:35	Third Keynote **The problems with current risk management practices: how to overcome them** M. Loosemore *Faculty of the Built Environment, University of New South Wales, Sydney, Australia*				
9:40 - 10:40	Third Parallel Sessions				
	Chair: Prof. Ian Gilbert **Concrete and Masonry Structures – (III)** **Ballroom**	Chair: Prof. Nader Ghafoori **Construction Materials – (III)** **Trilogy**	Chair: Prof. Mumtaz Usmen **Procurement, Contract and Claim** **The Library**	Chair: Dr. Y. X. Zhang **Structural Analysis – (I)** **Fairmont One**	Chair : Prof. M. Kumaraswamy **Construction Practices in Different Countries – (I)** **Fairmont Two**
9:40 – 9:55	**Development of a semi-fabricated composite system for floor slab construction** W.A. Thanoon *Department of Civil Engineering, Universiti Teknologi Petronas, 31750 Tronoh, Malaysia* M.S Jaafar & J. Noorzaei *Department of Civil Engineering, Universiti Putra Malaysia, 43400 Serdang, Malaysia*	**Determination of representative crack density of cementitious materials** H.H. Pan, Y.W. Chen & D.H. Lin *Department of Civil Engineering, Kaohsiung University of Applied Sciences, Kaohsiung, Taiwan*	**Electronic reverse auctions in construction procurement** B. Ozorhon & D. Arditi *Illinois Institute of Technology, Chicago, Illinois, USA*	**Lateral buckling of elastically restrained arches** Y.L. Pi, M.A. Bradford & F. Tin-Loi *School of Civil & Environmental Engineering, The University of New South Wales, Sydney Australia*	**The intercultural adjustment in Hong Kong international construction firms: a study between local Chinese and British expatriate project managers** J.K.W. Wong & H. Li *Department Building and Real Estate, The Hong Kong Polytechnic University, Hung Hom, Hong Kong* P.N.K. Wong Gammon Construction Limited, Hong Kong
9:55 – 10:10	**Minimum reinforcement and fiber contribution in tunnel linings: the Italian experience** B. Chiaia, A.P. Fantilli & P. Vallini *Department of Structural and Geotechnical Engineering, Politecnico di Torino, Torino, Italy*	**Utilisation of quarry waste as fine aggregate in high-strength rice husk ash concrete** S.N. Raman & M.F.M. Zain *Universiti Kebangsaan Malaysia, 43600 UKM Bangi, Selangor, Malaysia* H.B. Mahmud & S.L. Low *University of Malaya, 50603 Kuala Lumpur, Malaysia*	**Additional value effects of the Specialist Task Organizations (STOs) procurement approach in a building project** A.S. Oyegoke *Helsinki University of Technology, Construction Economics and Management, Finland*	**The analytical method in structural engineering analysis** R. V. Jarquio *New York City Transit, New York, USA*	**ISO9001:2000-advantages and obstacles in the Portuguese construction business** N.M. Cachadinha *Department of Civil Engineering, Universidade Nova de Lisboa, Portugal*

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10:10 – 10:25	**Precast concrete residential applications in the United States** C.J. Perry *Perry & Associates, LLC, Chicago, Illinois, USA*	**Influence of aggregate gradation on the engineering properties of lightweight aggregate concrete** H.J. Chen, H.S. Peng & T.H. Liu *Department of Civil Engineering, National Chung-Hsing University, Taiwan*	**Bounded rationality, opportunism and trust in cooperative contracting** S.O. Cheung *Department of Building and Construction, City University of Hong Kong, Hong Kong*	**Displacement analysis due to shallow tunneling using bending plate** Y. Tokushige & T. Tsutsumi *Kagoshima National College of Technology, Kirishima, Japan*	**Construction management during political uncertainty** H.R. Panthi *A & S Engineers, Houston, TX, USA* I.B. Paudel *BSW International, Phoenix, Arizona, USA* E. Koehn *Lamar University, Beaumont, TX, USA* J.F. Koehn *Chadron State College, Chadron, NE, USA*
10:25 – 10:40	**Strengthening of shear damaged RC beams with external clamping** T.G. Suntharavadivel & T. Aravinthan *Centre of Excellence in Engineered Fibre Composites, Faculty of Engineering & Surveying, University of Southern Queensland, Australia*	**Flexural strength of concrete member with high performance expansive material** K. Ishida *P.S. Mitsubishi Construction Co. Ltd. Hiroshima Branch, Hiroshima, Japan* I. Yoshitake, H. Hamaoka & S. Hamada *Department of Civil Engineering, Yamaguchi University, Yamaguchi, Japan*	**Assessment of time extension clauses on claim settlement** K.C. Iyer & N.B. Chaphalkar *Indian Institute of Technology Delhi, New Delhi, India*	**Analysis of orthotropic rock specimen under diametrical loadings** R. Kamihoriuchi & T. Tsutsumi *Kagoshima National College of Technology, Kirishima, Japan*	**Some effects of culture in industry and on projects in South Africa** B. Eksteen *Faculty of Engineering, Nelson Mandela Metropolitan University, Port Elizabeth, South Africa* S. Krause *Department of Industrial Engineering, Nelson Mandela Metropolitan University, Port Elizabeth, South Africa*
10:40 - 11:10	Morning Tea Break				
11:10—12:40	Fourth Parallel Sessions				
	Chair: Dr. Ravi Ravindrarajah **Concrete and Masonry Structures – (IV)** **Ballroom**	Chair : Prof. Emad Gad **Construction Materials – (IV)** **Trilogy**	Chair : Dr Saman de Silva **Risk Management** **The Library**	Chair: Prof. Andrew Deeks **Bridges and Special Structures – (I)** **Fairmont One**	Chair: Mr. S .K. Das **Construction Practices in Different Countries – (II)** **Fairmont Two**
11:10 – 11:25	**Experimental determination of energy absorption capacity for prestressed concrete sleepers under impact loads** A.M. Remennikov & S. Kaewunruen *University of Wollongong, Wollongong, NSW, Australia*	**Research on influence factors of coefficient of thermal expansion of concrete** G. Gao, C. Qian , C. Zhu & S. Ding *School of Materials Science and Engineering, Southeast University, Nanjing 210096, China*	**A theoretical framework for optimizing risk allocation and management in Public-Private Partnership projects** X.-H. Jin & H. Doloi Faculty of Architecture Building & Planning, University of Melbourne, Melbourne, Victoria, Australia	**Structural art in arch bridge design in Croatia** J. Radić, A. Mandić & A. Kindij *Faculty of Civil Engineering, University of Zagreb, Croatia*	**The effect of political unrest on construction time for food grain warehouses in Bangladesh** I. Choudhury *Texas A&M University, College Station, Texas, USA*

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16:35 – 16:50	**Unburied offshore pipeline stability analysis under severe storm condition** T. Takatani *Maizuru Nat'l College of Technology, Maizuru, Kyoto, Japan* D. Brooker *MCS, Perth, Western Australia, Australia*	**Fragility analysis of liquid storage steel tanks in seismic areas** A. Di Carluccio, G. Manfredi & I. Iervolino *Department of Structural Engineering, University of Naples "Federico II", Naples, Italy* G. Fabbrocino *Department SAVA, Engineering & Environment Division, University of Molise, Campobasso, Italy*	**Rehabilitation of non-ductile RC moment-resisting frames with poor beam-column joints** Y.C. Wang & K. Hsu *Department of Civil Engineering, National Central University, Taiwan*	**A strain based damage model for structural concrete** K. Thapa & S. Yazdani *Department of Civil Engineering, North Dakota State University, Fargo, USA* M. Feng *Department of Civil Engineering, University of California, Irvine, USA*	**Topology optimization of nonlinear structures for energy absorption** X. Huang & Y.M. Xie *School of Civil, Environmental and Chemical Engineering, RMIT University, Melbourne, Australia* G. Lu *Faculty of Engineering and Industrial Sciences, Swinburne University of Technology, Hawthorn, Melbourne, Australia*
16:50 – 17:05		**Structural monitoring and earthquake protection of the School of Engineering at Federico II University in Naples** C. Rainieri, E. Cosenza & G. Manfredi *Department of Structural Engineering, University of Naples "Federico II", Naples, Italy* G. Fabbrocino *Department SAVA, Engineering & Environment Division, University of Molise, Campobasso, Italy*	**Shear strength of steel fibre reinforced prestressed concrete beam** R.P. Langsford, N. Lloyd & P.K. Sarker *Curtin University of Technology, Perth, Western Australia*	**A novel method for computation of wind force on braced dome** B.J. Shah *L. E. College, Morvi, Gujarat, India* H.S. Patil *S. V. National Institute of Technology, Surat, Gujarat, India*	**Evolutionary algorithm based on stochastic schemata exploiter** T. Maruyama & E. Kita *Graduate School of Information Sciences, Nagoya University, Nagoya, Japan*
17:05 – 17:20		**Experimental verification of polynomial friction pendulum isolators for near-fault seismic isolation** L.Y. Lu, J. Wang & S.W. Yeh *Department of Construction Engineering, National Kaohsiung First University of Science & Technology, Kaohsiung, Taiwan*	**An estimation of slip strength of perfobond rib connector considered with concrete confinements** K. Fujii & M. Himukai *Graduate School of Engineering, Hiroshima University, Higashi-Hiroshima, Japan* H. Iwasaki & Y. Dokan *Ishikawajima-Harima Heavy Industries Company, Tokyo, Japan*	**Finite deformation analysis using Natural Strain (Anisotropy of elastic modulus G)** Y. Kato & T. Nagumo *Department of Mechanical Engineering, College of Science & Technology, Nihon University, Tokyo, Japan*	**Shape optimization of underground excavation using ESO method** K. Ghabraie, Y.M. Xie & X. Huang *School of Civil, Environmental and Chemical Engineering, RMIT University, Melbourne, Australia*
19:00 - 22:00	Banquet				

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15:35—16:05	Afternoon Tea Break				
16:05—17:35	Sixth Parallel Sessions				
	Chair : Dr. Leszek Janusz **Computational Mechanics – (I)** **Ballroom**	Chair :Prof. Jay Sanjayan **Dynamic Impact and Earthquake Engineering – (IV)** **The Library**	Chair :Prof. T. Jagannadha Rao **Concrete and Masonry Structures – (V)** **Trilogy**	Chair : Prof. Sam Fragamoni **Structural Analysis – (II)** **Fairmont One**	Chair :Prof. Gerhard Girmscheid **Structural Optimization & Evolutionary Procedures – (I)** **Fairmont Two**
16:05 – 16:20	**Formulation of a nonlinear shear-flexible rectangular layered reinforced concrete plate element by updated Lagrangian approach** Y. X. Zhang *Division of Engineering, Science and Technology, UNSWASIA, Singapore*	**Dynamic response of damped orthotropic plate on Pasternak foundation to dynamic moving loads** S.W. Alisjahbana & W. Wangsadinata *Tarumanagara University, Jakarta, Indonesia*	**Shear crack width of concrete member under axial load and transverse reversed cyclic load** T. Tsubaki *Department of Civil Engineering, Yokohama National University, Yokohama, Japan* M. Dragoi *Graduate School, Department of Civil Engineering, Yokohama National University, Yokohama, Japan*	**Analytical solutions for in-plane displacements of curved beams** X.F. Li & Y.H. Zhao *Institute of Road and Bridge Engineering, Dalian Maritime University, Dalian, Liaoning, China* X.W. Li *Structural Engineer, Shenzhen Municipal Engineering Design Institute. Shenzhen, Guangdong, China*	**Evolutionary structural optimisation and parametric design in transdisciplinary collaboration** D. Holzer *Spatial Information Architecture Lab (SIAL), RMIT University, Melbourne Australia* J. Tang & Y.M. Xie *School of Civil, Environmental & Chemical Engineering, RMIT University, Melbourne Australia* M.C. Burry *Spatial Information Architecture Lab (SIAL), RMIT University, Melbourne Australia*
16:20 – 16:35	**Object-oriented programming of rectangular truss element** F. Jiang, L. Huang & X. Cao *School of Civil & Hydraulic Engineering, Dalian University of Technology, Dalian, China*	**Stochastic analysis of maximum responses of frame structures using a fishbone-shaped model** W.C. Pu & Y.G. Zhao *Nagoya Institute of Technology, Nagoya, Japan*	**Study on the fracture behavior of the R/C member covered by acrylic resin and random staple glass fiber matting** T. Tamura & M. Tokuda *Tokuyama College of Technology, Tokuyama, Japan* T. Kadonaga *Nagaoka University of Technology, Nagaoka, Japan* T. Yamamoto *MBS corporation, Ube, Yamaguchi, Japan*	**Integrated equation of motion for dynamic analysis of structures with smooth hysteresis** C.H. Wang *CSIRO Division of Sustainable Ecosystems, Melbourne, Australia*	**A three phase Hybrid Genetic Algorithm approach for structural topology optimization** C. V. Ramakrishnan, N. Singh & D. K. Sehgal *Department of Applied Mechanics, I.I.T Delhi, New Delhi India*

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11:25 – 11:40	**Use of fault tree analysis in risk assessment of reinforced concrete bridges exposed to aggressive environments** W. Zhu, S. Setunge, R. Gravina & S. Venkatesan *RMIT University, Melbourne, Victoria, Australia*	**Galvanized steel in asset design** E. Pimentel *Galvanizers Association of Australia, Melbourne, Australia*	**Risk consideration in the handling of a large scale engineering project** C.K. Tse & W.M Wong *City University of Hong Kong, Hong Kong* C.H. Chu *Penta Ocean Construction Co. Ltd., Hong Kong Branch*	**Fatigue in concrete decks of cable supported bridges** P.K. Singh *Department of Civil Engineering, Institute of Technology, Banaras Hindu University, Varanasi, India*	**Structural and finishing costs in Yemen** B. Sultan *University of Sana'a, Yemen*
11:40 – 11:55	**Internal temperature rise and early thermal stresses in concrete** B.M. Abbas & R.S. Al Mahaidi *Department of Civil Engineering, Monash University, Melbourne, Australia*	**Multiscale modeling of concrete strength** C. Liu *Department of Civil & Environmental Engineering, Villanova University, USA* K.P. Jen *Department of Mechanical Engineering, Villanova University, USA*	**Developing a framework of retained risk in Public-Private Partnership (PPP) social infrastructure projects.** H.K. Doloi & P. Raisbeck *Faculty of Architecture, Building and Planning, The University of Melbourne, Australia*	**The usage of glued laminated timber structures in architecture** V. Kilar & S. Vratuša *University of Ljubljana, Faculty of Architecture, Ljubljana, Slovenia*	**Fast track design build of concrete viaduct** M. Seniwongse *Design Construction Consultants Corporation, Boston, Massachusetts, U.S.A.*
11:55 – 12:10	**Development of a simple and low cost shear connector for minimizing tripping hazards of pedestrian concrete pavements** Y.C. Koay, Y.M. Xie & S. Setunge *School of Civil, Environmental and Chemical Engineering, RMIT University, Melbourne, Australia*	**Sulfate resistance of fly ash concrete in wet-dry conditions** N. Ghafoori & H. Diawara *Department of Civil and Environmental Engineering at the University of Nevada, Las Vegas, USA*	**Risk ranking from the factors in feasibility study of building construction in Indonesia** B.A. Firmansyah, A. Veronika & L.S. Riantini *Construction Management, University of Indonesia. Depok, Indonesia*	**Effects of heavy truck load on medium span bridge girders** X. Zhou & A. Saber *Department of Civil Engineering, Louisiana Tech University, Ruston, LA, USA* W. Alaywan *Louisiana Transportation Research Center, Baton Rouge, LA, USA*	**Determinants of construction company's success performance indicators in Indonesia** Sudarto *Civil Engineering Department Faculty of Engineering, University of Indonesia, Depok, Indonesia* A. Veronika, L.S. Riantini & Sulhaemi Construction Management, University of Indonesia, Depok, Indonesia
12:10 – 12:25	**Behaviour of fibre reinforced concrete slabs** M.N.S. Hadi *School of Civil, Mining and Environmental Engineering, University of Wollongong, Wollongong, NSW, Australia*	**Investigation of hot-pressing process for manufacturing of hardwood particleboard** D. Pannipitiya, S. Setunge, N. Gamage & M. Jollands *RMIT University, Melbourne, Victoria, Australia*	**Vulnerability of glass windows to explosions** H.S. Susiswo, T. Ngo, C. Duffield & P. Mendis *Department of Civil and Environmental Engineering, University of Melbourne, Melbourne, Australia*	**Construction project management of large concrete arch bridges in Croatia** Ž. Žderić *Konstruktor inženjering, Split, Croatia* A. Kindij & J. Radić *Faculty of Civil Engineering, Zagreb, Croatia*	**Identification of the cause of external factor problems that influence construction company's performance in Indonesia** Sudarto, B. Trigunarsyah, I.S. Abidin & B.S. Soepandji Civil Engineering Department, University of Indonesia, Depok, Indonesia

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12:25 – 12:40	**Experimental work on reinforced and prestressed concrete deep beams with various web openings** T.M. Yoo, J.H. Doh & H. Guan *Griffith University, Gold Coast, Queensland, Australia* S. Fragomeni *Victoria University, Melbourne, Victoria, Australia*	**Hemp utilization in cement-bonded particle boards** F. Khestl & J. Bydžovský *Brno University of Technology, Faculty of Civil Enginnering, Brno, Czech Republic*		**Evaluation and rehabilitation of concrete bridges in USA** M. Seniwongse *Design Construction Consultants Corporation, Boston, Massachusetts, USA*	**The insufficiently recognized importance of specialty trade contractors in the U.S. construction industry** R. Pietroforte *Worcester Polytechnic Institute, Worcester, U.S.A.* N. Costantino *Polytechnic of Bari, Bari, Italy*
12:40 - 13:40	Lunch				
13:40 - 14:15	Fourth Keynote **Structural response as an aspect of fire safety of buildings** I.R.Thomas *Centre for Environmental Safety and Risk Engineering, Victoria University, Melbourne, Australia*				
14:20 - 15:35	Fifth Parallel Sessions				
	Chair :Prof. Faas Moonen **Sustainability** **Ballroom**	Chair :Prof. Amarjit Singh **Education and Training** **Trilogy**	Chair : Prof. Mohd. Saleh Jaafar **Dynamic Impact & Earthquake Engineering – (III)** **The Library**	Chair : Prof. Xiao-Ling Zhao **Steel Structures – (III)** **Fairmont One**	Chair: Mr. Richard Eckhaus **Life Cycle Analysis** **Fairmont Two**
14:20 – 14:35	**Sustainability and liveability: residents' experience of the Ecohome in Melbourne** S. Rahman, I. Patnaikuni & S. De Silva *RMIT University, Melbourne, Victoria, Australia*	**Positioning an academic department to develop the structural engineer of the 21st century** R.L. Amory *Morgan State University, Baltimore, MD, USA*	**Investigation and comparison of the earthquakes of Silakhor desert and Bam** H. Niroumand *Asia Civil Research Institute, Tehran, Iran* S.M. Zahrai School of Civil Engineering, University of Tehran, Iran	**The design of portal frames using cold-formed channel sections: A comparison of Australian, US and European requirements** D.T. Vyden & J.E. Mills *University of South Australia, Adelaide, Australia*	**Life cycle cost analysis for home purchase** A. Singh & K. Gautam *University of Hawai'i at Manoa, Honolulu, Hawai'i, USA*
14:35 – 14:50	**Sustainability and limit states of existing bridges in Croatia** J. Radić & A. Mandić *Faculty of Civil Engineering, University of Zagreb, Croatia*	**Application of ethics in engineering practice…** *quis custodiet ipsos custodes***?** J. St. J. S. Buckeridge School of Civil, Environmental and Chemical Engineering, RMIT University, Melbourne, Australia	**Investigation and comparison of the earthquakes of Silakhor desert and Manjil** H. Niroumand *Asian Civil Research Institute, Tehran, Iran*	**Finite element modelling of steel lattice tower legs reinforced for increased loads** C. Tongkasame, J. Mills & Y. Zhuge *University of South Australia, Adelaide, Australia*	**Probabilistic risk-based LC NPV Model** G. Girmscheid *Institute for Construction Engineering and Management, ETH Zürich, Zurich, Switzerland*

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14:50 – 15:05	**The reduction of negative residential construction environmental impacts through the use of modular construction techniques** D. Oxley, S. de Silva & Y.M. Xie *RMIT University, Melbourne, Australia*	**Shifting the curve to the left: student response to BIM in the classroom** K.E. Hedges & A.S. Denzer *Department of Civil and Architectural Engineering, University of Wyoming, Laramie, WY, USA*	**Seismic proof for moment-resisting R.C. structure considering member displacement** W.P. Sung *National Chin-Yi University of Technology, Taiping, Taichung, Taiwan, R.O.C.* M.H. Shih & C.L. Chen *National Kaohsiung University of Science and Technology, Kaohsiung, Taiwan, R.O.C.*	**Elastic-plastic local stability and load-carrying capacity of steel members** P. Juhás *Technical University – Civil Engineering Faculty, Košice, Slovakia*	**Use of ICT to improve quality, whole life costs and communications** A.J. Christian, M. Issa & J.H. Rankin *University of New Brunswick, Fredericton, New Brunswick, Canada*
15:05 – 15:20	**Passive design and thermal performance of houses for local climate** B. Su *School of Architecture and Landscape Architecture, UNITEC New Zealand, Aucklan,d New Zealand*	**Integrating Augmented Reality into design and architecture curriculum** X. Wang *Key Centre of Design Computing and Cognition, University of Sydney, Australia* J. Chen *High-grade Highway Administration Bureau of Jiangxi Province, Nanchang, Jiangxi, P.R. China*	**Probabilistic holistic seismic risk assessment methodology for industrial facilities** K.Nasserasadi, M. G. Ashtiany & S. Eshghi *International Institute of Earthquake Engineering and Seismology (IIEES), Tehran, Iran* M. Zolfaghari *Civil Engineering Department of K.N.T. University, Tehran, Iran*	**Experiments on ultimate bending strength of corroded thin cylindrical shells** K. Hashimoto, T. Kondoh, H. Nakamura & K. Fujii *Graduate School of Engineering, Hiroshima University, Higashi-Hiroshima, Japan*	**Study on sustainable project management based on lifecycle theory** S. Li & F. Xu *RCICEM, Faculty of Real Estate and Construction Management, Chongqing University, Chongqing, China* L. Zhang *Civil Engineering College, Chongqing University, Chongqing, China*
15:20 – 15:35	**Safety and sustainability of monolithic dome structures in hurricane prone regions** K.R. Grosskopf & J. Sullivan *University of Florida, Gainesville, Florida, USA*	**The Solar Decathlon: lessons learned from transportable solar houses** K.E. Hedges, A.S. Denzer & C. Yavuzturk *Department of Civil and Architectural Engineering, University of Wyoming, Laramie, WY, USA*	**Seismic response characteristics of a multi-span continuous rigid-frame bridge constructed on soft ground** K. Kinoshita, H. Nakamura & K. Fujii *Graduate School of Engineering, Hiroshima University, Higashi-Hiroshima, Japan* Y. Fujiwara *PS Mitsubishi, Osaka, Japan*	**A new approach to design and modeling of flexible corrugated steel plate structures under construction** L. Janusz *ViaCon-Poland, Rydzyna, Poland* O. Kapliński *Poznan University of Technology, Poznan, Poland*	**Applying systems engineering for adding value in the built environment** H. de Ridder & R. Vrijhoef *Delft University of Technology, Faculty of Civil Engineering, Delft, The Netherlands*

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	Non Destructive Testing and Evaluation – (II) Ballroom	Geotechnical Engineering, Foundation and Tunnelling – (III) The Library	Composite Materials – (III) Trilogy	Computational Mechanics – (II) Fairmont One	Construction Materials – (VII) Fairmont Two
14:10 – 14:25	**Non-destructive evaluation of corrosion activity in reinforced concrete slab** M.E. Ismail & M. Ismail *Universiti Teknologi Malaysia, Skudai, Johor, Malaysia* M. Ohtsu *Kumamoto University, Kumamoto, Japan*	**Industrialization of foundation in house-building: put into practice** S.P.G. Moonen *Eindhoven University of technology, Eindhoven, the Netherlands*	**Behaviour of glass fibre reinforced gypsum wall panel under cyclic lateral loading** M. Janardhana *JNTU College of Engineering, Hyderabad, INDIA &* *Department of Civil Engineering, IIT Madras, Chennai, India* A. M. Prasad & D. Menon *Department of Civil Engineering, IIT Madras, Chennai, India*	**Nonlinear analysis of shear wall system with optimal membrane triangles including soil structure interaction** M. Paknahad, J. Noorzaei, M.S. Jaafar & W.A.M. Thanoon, *Civil Engineering Department, University Putra Malaysia, Serdang, Selangor, Malaysia*	**Calculation method of concrete shrinkage based on coupling heat and moisture transfer** C.X. Qian & D.P. Chen *School of Materials Science and Engineering, Southeast University, Nanjing, China*
14:25 – 14:40	**Inspection of steels size using radioactive methods** M.C. Chen & Y.L. Jan *Department of Civil Engineering, Ching Yun University, Jung-Li, Taiwan*	**HDD – Horizontal Directional Drilling, pressure related failures caused by pilot drilling operations** B. Schaiter & G. Girmscheid *Institute for Construction Engineering and Management, ETH Zurich, Zurich, Switzerland*	**Non-linear FE analysis of continuous prestressed concrete beams** H. Faleh *Department of Civil Engineering, Monash University, Melbourne, Australia* I.A.S Al-Shaarbaf *Al-Nahrain University, Baghdad, Iraq*	**Nonlinear analysis of a reinforced concrete shallow arch using a new layered cylindrical quadrilateral element** Y. X. Zhang *Division of Engineering, Science and Technology, UNSWASIA, Singapore*	**A copolymer as a concrete admixture** J.W. Chen, F.T. Jiang & K.C. Hsu *Department of Chemistry, National Taiwan Normal University, Taipei, Taiwan, ROC* Y. N. Sheen *Department of Civil Engineering, National Kaohsiung University of Applied Sciences, Taiwan, ROC*
14:40—15:00	Closing Ceremony & Afternoon Tea				